

## HISTORY OF SCIENCE I

### 1st TERM

<u>Lecture I</u> (M.L.R.)	Aristotelian Physics (Selected passages from Aristotle: Physica, De Caelo and De Generatione et Corruptione)
<u>Lecture II</u> (M.P.E.)	Greek biology: observation and classification of living forms. Aristotle ; Theophrastus; Dioscorides.
<u>Lecture III</u> (M.L.R.)	Aristotelian Physics Cont.
<u>Lecture IV</u> (M.P.E.)	Animal Physics, generation, medical physiology. Aristotle, Hippocratic School, Erasistratus, Herophilus, Galen.
<u>Lecture V</u> (M.L.R.)	The development of Astronomy to 1500 AD. Aristarchus, Eratosthenes, Hipparchus, Ptolemy, Arabic Astronomy.
<u>Lecture VI</u> (M.P.E.)	Greco-Arabic science and its reception in the Christian West. The development of Alchemy.
<u>Lecture VII</u> (M.L.R.)	The development of Mechanics to 1500 AD - Archimedes, Buridan, Oresme.
<u>Lecture VIII</u> (M.P.E.)	Alchemy in Europe.
<u>Lecture IX</u> (M.L.R.)	Copernicus.
<u>Lecture X</u> (M.P.E.)	Anatomy and Physiology in the 16th C.
<u>Lecture XI</u> (M.L.R.)	Kepler.

Vacation Reading: Harvey: de Motu Cordis, Selected passages from  
Galileo: The Sidereal Messenger, The Assayer,  
The Dialogo and the Discorsi.

2nd TERM

Lecture I  
(M.L.R.)

Galileo - Contribution to Astronomy.

Lecture II  
(M.P.E.)

William Harvey and the discovery of the circulation of the blood: the reception of Harvey's discoveries: Mechanism and Vitalism.

Lecture III  
(M.L.R.)

Galileo - Contribution to Mechanics.

Lecture IV  
(M.P.E.)

Harvey and others on Generation: Embryology; Preformation and Epigenesis.

Lecture V  
(M.L.R.)

Gilbert - Early theories of Magnetism.

Lecture VI  
(M.P.E.)

The Classical Microscopists: biogenesis and abiogenesis.

Lecture VII  
(M.L.R.)

Descartes - The mechanical world view.

Lecture VIII  
(M.P.E.)

Herbals, Encyclopaedic Naturalists, the problem of taxonomy.

Lecture IX  
(M.L.R.)

Bacon and the experimental method.

Lecture X  
(M.P.E.)

Mining and chemical technology. Biringuccio; Agricola.

Lecture XI  
(M.L.R.)

Huyghens, Leibniz and Hooke. The development of mechanics prior to Newton.

Vacation Reading: Selected passages from Newton: Principia and opticks.

3rd Term

Lecture I  
(M.L.R.)

Newton and Gravitation

Lecture II  
(M.P.E.)

Scientific Societies in the 17th C.

Lecture III  
(M.L.R.)

Newton on Mechanics

Lecture IV  
(M.L.R.)

Newton's work on Optics.

HISTORY OF SCIENCE II

1st TERM

D.A.G.

7 lectures on the discovery of non-Euclidean geometry and the arithmetization of analysis in the history of 19th c. mathematics.

followed by

H.R.P.

3 lectures on 17th, 18th and 19th century chemistry.

2nd TERM

H.R.P.

1 lecture on 19th century chemistry

followed by

M.L.R.

6 lectures on 19th century physics: the development of the kinetic theory of gases, the laws of thermodynamics and the concept of the electromagnetic field.

followed by

M.P.E.

4 lectures on 19th century biology: cell theory and theories of evolution.

3rd TERM

Project in history of science. An extended essay on a selected topic in the history of physics, chemistry, mathematics or biology.

Total Number of Lectures for History of Science I and II

M.P.Earles	15 lectures	Biology
H.R. Post	4 lectures	Chemistry
D.A. Gillies	7 lectures	Mathematics
M.L.G. Redhead	<u>21 lectures</u>	Physics
<u>TOTAL</u>	<u>47 lectures</u>	